

DUAL HIGHLINE SYSTEM AND METHOD

Abstract

Embodiments of the invention move objects throughout three-dimensional space. This is accomplished with two highlines which support skates that move along the highlines. The skates support a three sheave device which in turn supports a platform. The entire system is driven in three dimensions by a Y movement rope pair and an XZ movement rope. The Y movement rope pair moves a skate on each highline in the Y-axis direction. The X-axis and Z-axis motion of the platform is controlled by a single XZ movement rope. Increasing the deployed length of the XZ movement rope causes the platform to lower in the Z-axis direction, while decreasing the deployed length of the XZ movement rope causes the platform to rise. For embodiments that employ equal length highlines in a parallel configuration, there is no need for a control system since the Z-axis displacement is independent of X and Y-axis movement. In addition, since the ropes are controlled from one location, distantly located motors and electrical cables are not required. Many types of useful devices may then be attached to the platform including devices that require external power or de-

vices that possess their own power and are operated via wireless signals. Non-parallel and unequal length highline embodiments of the invention may be readily constructed. As the platform traverses X and Y space, Z-axis displacement is dependent upon the distance between the two skates in these embodiments.